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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/520,735	01/10/2005	Paulina Theodora Gerarda Donders	AOM-106	9749
54630 7590 12/27/2007 ROBERTS & ROBERTS, LLP ATTORNEYS AT LAW P.O. BOX 484 PRINCETON, NJ 08542-0484			EXAMINER ALLISON, ANDRAE S	
			ART UNIT 2624	PAPER NUMBER
			MAIL DATE 12/27/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/520,735

Applicant(s)DONDEERS, PAULINA THEODORA
GERARDA**Examiner**

Andrae S. Allison

Art Unit

2624

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 October 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7,9-18 and 26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7,9-18 and 26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Remarks.

1. The Office Action has been issued in response to amendment filed October 16, 2007. Claims 1-7, 9-18 and 26 are pending. Applicant's arguments have been carefully and respectfully considered in light of the instant amendment, and are not persuasive⁴. Accordingly, this action has been made FINAL.

Drawings

Applicant has cancelled claims 19-25. Therefore the objection is being withdrawn.

Specification

Applicant has amended the specification throughout to remove the word "viz" and inserted the heading in appropriate sections of the specification. Therefore the objection is withdrawn.

Claim Objection

The claims have amended to correct minor informalities. Therefore the objection is withdrawn.

112 Rejection

Applicant has amended claim 7 to provide proper antecedent basis for all claim limitations. Therefore the rejection is withdrawn.

Examiner Notes

In the previous office action, the Examiner informed Applicant that claims 8-9 were allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims. Applicant, deleted some of the limitations of claim 1; thus all the limitations of the base claim were not included thereby changing the scope of the claims. Therefore, a new ground of rejections is presented.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-7, 10-12, 14-17 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reed (EP 0743616 A2) in view of Dietrich et al (US Patent No.: 7,201,340).

As to independent claim 1, Reed discloses a method of analyzing a bundle of banknotes (method for counting sheets; column 1, lines 5-6), which method comprises

the steps of providing a bundle of banknotes, which bundle comprises at least one surface defined by the edges of banknotes (see 10 of Fig 2, where a sheet pack is defined by edges), illuminating the surface of said bundle (see column 6, lines 10-15, where the stack is illuminated), providing a two-dimensional image of the bundle by making use of an optical sensor (see column 13, lines 13-36, where a 2D image is obtained by a CCD sensor), and providing an output signal that represents the result of the analysis (see column 7, line 59 and column 8, line 1-2). However, Reed does not expressly disclose bundle of banknotes and subjecting the bundle to one or more destructive operation. Dietrich discloses a method for processing sheet material (column 1, lines 6-7) which includes bundle of banknotes (12, see Fig 1) and subjecting the bundle to one or more destructive operation (see column 3, lines 1-2). At the time of the invention, it would have been obvious to a person of ordinary skill in the art to have combined the teaching of Reed and Dietrich to improve monitoring of the processing of sheet material in particular in regards to disturbances in the course of processing by detecting and the identifying individual sheets (column 1, lines 48-55).

As to claim 2, Reed discloses the method, wherein the image is reduced in the x-direction, which x-direction is defined as the width of the bundle of banknotes (see Fig 2).

As to claim 3, Reed discloses the method wherein the step of providing the two-dimensional image of the bundle and obtaining an output signal comprises the step of

carrying out an image processing operation, using a pixel matrix (see column 7, lines 1-19, where the signal is processed by a DSP after A/D conversion).

As to claim 4, Reed discloses the method, wherein the step of carrying out an image processing operation comprises the provision of a pixel matrix in which the number of pixels in the y-direction is larger than the number of pixels in the x-direction (see column 6, lines 33-55).

As to claim 5-6, Reed does not expressly disclose the method wherein the number of pixels in the y-direction is at least 3 times larger than the number of pixels in the x-direction and the number of pixels in the y-direction is preferably at least 5 times larger than the number of pixels in the x-direction. However, it would have been obvious to have the number of pixels in the y-direction is at least 3 times larger than the number of pixels in the x-direction and the number of pixels in the y-direction is preferably at least 5 times larger than the number of pixels in the x-direction depending on the height of the bundle. Applicant has not disclosed that 3 times larger than the number of pixels in the x-direction or 5 times larger than the number of pixels in the x-direction provides an advantage, is used for a particular purpose or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected Applicant's invention to perform equally well with 2 or 4 times larger as long as the length of the pixels in the y direction is as high or higher than the height of the bundle (OFFICIAL NOTICE).

As to claim 7, Reed teaches the method, wherein the step of carrying out the image processing operation comprises the steps of awarding a value corresponding to the optical density to a pixel (gray values ranging from 0-255, column 7, lines 14-17) , determining a threshold value of the optical density (level of reflectivity, column 7, lines 24-26), awarding a priority to a pixel having an optical density value higher than the threshold value while determining the so-called second derivative of the density profile of the surrounding pixels, determining an average value of the density for a row of pixels in the y-direction, which row comprises one or more pixels having a priority, determining the spread and the standard deviation of the average value thus determined, and providing an output signal which is the summation of the number of average values higher than the threshold value (see column 11, lines 1-12, where the standard deviation is determine by the average calculation).

As to claim 10, Reed teaches the method wherein the analysis comprises the determination of one or more of the following parameters, viz. the authenticity, the number of banknotes, the value and the fitness of the bundle of banknotes (sheet pack counting, column 12, lines 52-57).

As to claim 11, Reed does not expressly disclose the method wherein said irradiation with UV light is carried out on one side of a bundle of banknotes. However, it would have been obvious to irradiate the bundle with UV light to determine the

authenticity of the bundle. Furthermore, using UV light to determine authenticity is well known in the art (OFFICIAL NOTICE).

As to claim 12, Reed teaches the method wherein said irradiation with infrared light is carried out on one side of a bundle of banknotes (see column 6, lines 1-2).

As to claim 14, Reed teaches the method wherein an image of one side of the bundle of banknotes is obtained by making use of a high-resolution camera as an optical sensor, which image is processed, using a suitable data processing unit, for the purpose of determining the number of banknotes in a bundle (sheet pack counting, column 12, lines 52-57).

As to claim 15, Reed teaches the method wherein said determination of the number of banknotes in a bundle of banknotes is carried out by irradiating one side of the bundle with far infrared light at a number of angles of incidence and carrying out a time measurement on the reflected radiation (see column 5, lines 43-58 and column 6, lines 1-10).

As to claim 16, Reed teaches the method wherein an image of one side of the bundle of banknotes is obtained by making use of a high-resolution camera as an optical sensor, which image is processed, using a suitable data processing unit, for the purpose of determining the value of the bundle of banknotes (note that during counting

the value of the stack is determined, see column 12, lines 53-57).

As to claim 17, Reed teaches the method, wherein the fitness of a bundle of banknotes is determined by measuring the compressibility of a bundle of banknotes (see column 5, lines 27-46).

As to claim 26, Reed teaches the method wherein the providing the two dimensional image is carried out in such a manner that the image is enlarged in y-direction, which is defined as the height of the bundle of banknotes (see column 6, lines 37-59, where length of the waveform can be increased in height).

4. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Reed (EP 0743616 A2) in view of Dietrich et al (US Patent No.: 7,201,340) further in view of Jou et al (Pub. No.: US 2004/01213448).

As to claim 13, neither Reed teaches method wherein an image of one side of the bundle of banknotes is obtained by making use of a high-resolution camera as an optical sensor, which image is processed, using a suitable data processing unit (see column 5, lines 46-56), however does not teach imaging one side for the purpose of determining the authenticity of the bundle. Jou teach a method for recognizes counterfeit (column [p][002], lines 11-3) for imaging one side for the purpose of determining the authenticity of the bundle (see [p][009]). At the time of the invention, it would have been obvious to a person of ordinary skill in the art to have combined the

teaching of Reed as modified by Dietrich with Jou to capture an image of a banknote using an optical sensor such as CCD sensor ([p][0018] lines 7-11) to determine the authenticity of the banknote ([p][008]

5. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Reed (EP 0743616 A2) in view of Dietrich et al (US Patent No.: 7,201,340) further in view of Kayani (US Patent No.: 5,986,457).

As to claim 18, neither Reed or Dietrich teach the device wherein the fitness of a bundle of banknotes is determined by measuring the acoustic resistance of a bundle of banknotes. Kayani discloses an apparatus for measuring currency limpness (column 1, line 10-12) wherein the fitness of a bundle of banknotes is determined by measuring the acoustic resistance of a bundle of banknotes (see column 3, lines 18-27). At the time of the invention, it would have been obvious to a person of ordinary skill in the art to have combined the teaching of Reed as modified by Dietrich with Kayani to subject a note to acoustic wave to determine the limpness of the note (column 3, line 18-27) thus the issuing authority will decide whether to keep or remove the note from circulation (column 1, lines 62-67).

Allowable Subject Matter

6. Claims 9 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Inquires

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrae S. Allison whose telephone number is (571) 270-1052. The examiner can normally be reached on Monday-Friday, 8:00 am - 5:00 pm, EST.

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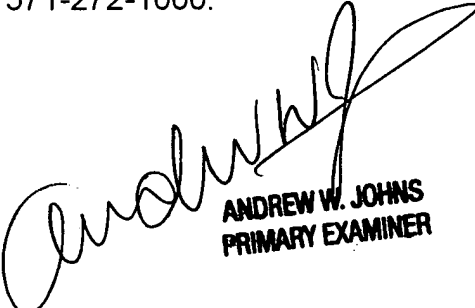
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bhavesh Meta can be reached on (571) 272-7453. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Andrae Allison

December 19, 2007

A.A.



ANDREW W. JOHNS
PRIMARY EXAMINER